

Body Mass Index Does Not Improve When Practicing School-Based Physical Activity

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A new study in *CMAJ* reports that school-based physical activity has positive health effects on children, although it does not improve body mass index (BMI).

Increasing rates in childhood obesity has become a public health issue. Obesity in children has more than tripled in the United States, Canada, the United Kingdom and across Europe since 1970, resulting in an increase in coronary artery disease, high blood pressure, diabetes, and other obesity-related diseases.

Although many local governments have, or are considering implementing policies to increase physical activity in schools, the recent study conducted with 18,141 children has concluded that there is no significant change in the BMI between children receiving a school-based activity and those in a controlled group.

Dr. Kevin Harris, BC Children's Hospital and his team write: "Although the physical activity interventions in the studies we analyzed were not successful in improving BMI, the underlying reasons for failure were unclear." They point out that BMI did not improve because the amount of physical activity may have been insufficient or because other causal factors may have a more important effect on BMI.

Since it results in overall health benefits, researchers still support school-based activity. "From a public health perspective, school-based physical activity is important, because of significant health benefits," the authors mention. The benefits include reduced blood pressure, increased lean muscle mass, bone mineral density, and aerobic capacity, and improved flexibility. They write in conclusion: "It is therefore important to promote school-based physical activity for its demonstrated health benefits, even though there is currently no evidence that it is an effective method to reverse the trend of increasing BMI in children."

"Effect of school-based physical activity interventions on body mass index in children: a meta-analysis"

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In a related comment, Dr. Louise Baur, University of Sydney, Australia says that "no simple or short-term changes, such as a physical activity intervention for a limited length of time in the school curriculum, can be expected to influence the prevalence of obesity." As an alternative, long-standing multilevel methods may have an impact, including healthy school meals, subsidies on fruits and vegetables for schools and daycares. "Recent evidence suggesting that the obesity prevalence rates in France plateaued following a range of multilevel interventions provides a glimmer of hope for other countries," she writes.

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